FARM INDEX

U.S. Department of Agriculture
December 1977

The Christmas Tree: Agriculture's Holiday Symbol

Outlook

As the portals open to 1978, the outlook for U.S. agriculture is fairly upbeat, and that pertains to farmers and consumers alike.

Crop producers stand to benefit from payments under the new farm law, and incomes to livestock growers should improve as the year unfolds. Grocery store prices will edge up in first-half 1978, but no more so than in 1977 and perhaps even less.

Wrapping up 1977. Cash receipts from farming in 1977 should come close to last year's $94 billion. Larger receipts from livestock will offset the poor performance on the crop side. Net farm income will also show little change—in the neighborhood of $20 billion.

In constant dollars, net income this year would be the lowest since the 1930's, but that doesn't tell the whole story of the farmer's well-being. For one thing, there are far fewer farmers now than in the 1930's, and their opportunities for off-farm earnings have increased vastly.

Also, in terms of net worth, many owners of farms are well off. Value of farm assets by the close of 1977 is estimated at a record $730 billion, up $59 billion from 1976.

Down the road. Blessed with good weather, U.S. farm output will continue large next year. Livestock picture is clearer than that for crops. Those low feed costs this year will encourage bigger production of fed beef, pork, poultry, and milk. Crop prospects, of course, hinge on weather. So far so good. The Midwest had good rains this fall. New Government programs will also come into the act but the response of producers can't be foretold right now.

As for farm prices, economists are not optimistic. They believe that even if exports hold up, farm prices won't improve much from the 1977 levels.

Livestock briefs. Thanks to attractive prices for grain and protein meal, producers are moving more cattle into feedlots, farrowing more sows, placing more broiler chicks and layers, and feeding more concentrates to dairy cows.

Production gain looks especially impressive for pork . . . maybe up a tenth in first half 1978 over the year before. Broiler production could be up 5 percent, eggs by 1 or 2 percent, and milk by 2 or 3 percent.

Situation for cattle is mixed. Cattle placed on feed were up 14 percent this summer. Placements should continue large in 1978, boosting fed beef production. However, a cutback in slaughter of nonfed cattle will keep total beef output under a year ago.

Food price forecast. It now looks like the earlier estimate for grocery store hikes in 1977 was on the nose—6 percent—and below the general inflation rate. Nor is the prognosis for next year so bad from the shopper's viewpoint. Economists see retail prices rising only 1 percent or so in each of the first two quarters of 1978.

Whatever the increase in grocery tags next year, chalk most of it up to higher costs to process and market farm foods. Labor costs in particular will be up due to wage agreements on the horizon for food and allied industries plus the pending increase in the minimum wage. Also adding fuel to food price runups—steeper charges for energy, packing materials, and transportation. All told, processing and marketing costs could average 4 to 6 percent higher in 1978.

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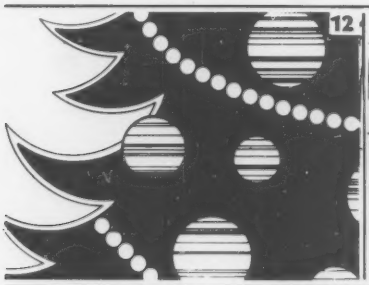

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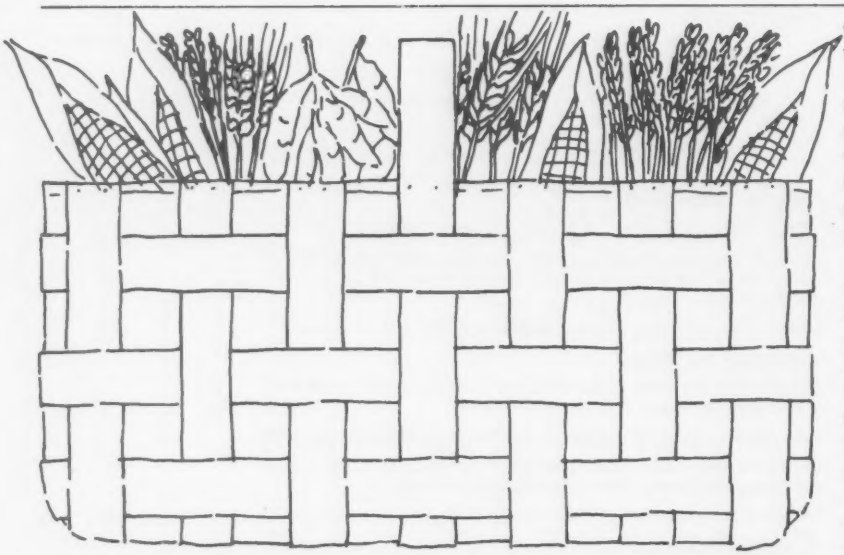
The Marketbasket of the World



Within three decades, U.S. agricultural export value has jumped from the minus side of the balance of trade ledger to become America's greatest export asset.

In the process, the export boom has enhanced farm income, while helping protect the U.S. economy from even a more serious trade imbalance, fueled by foreign oil prices.

Net exports of U.S. farm products have mushroomed in the last 10 years, from about $1 billion to $12 billion in fiscal years 1975 and 1976.

A minus-to-plus story. Noting a twelvefold increase doesn't tell the whole story of American foreign agricultural trade. In the 1950's, it was in a deficit position—we imported more than we exported—and nonagricultural trade was causing our positive overall trade balance.

Back then, agricultural trade deficits were about $1 billion a year, and nonagricultural gains were about $5 billion. The situation has done an about-face.

Today, with crops from 1 acre in 3 going for export, the dollars from agricultural trade are an important force buoying up the U.S. economy, softening the blow of increasing foreign oil prices. In 1976, agriculture's contribution to the balance of payments was just under $11 billion, a slight decline from the previous year. Agriculture's robust $12 billion in the surplus column last year helped make up part of the nonagricultural trade deficit of $21 billion.

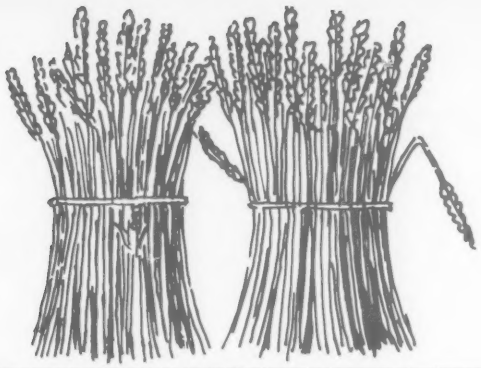
On the home front. Besides the trade balance benefits, foreign sales of agricultural products are also helping shore up farm product values here at home. If our exports should decline under free market conditions, tremendous price reductions for American farm products would be necessary to move the resulting surplus. The danger of falling prices to the farmers is the main reason the Government has established various price support and acreage control systems.

The protection intended for the farmer—helping prevent disastrous drops in farm income—may prove even more necessary in the future. Larger Government purchases of buffer stocks, Federal loan rate changes, or a combination of these programs, might be needed if wheat and other grain prices continue to tumble. Grain stocks are building, following huge production both in the U.S. and abroad.

A turnaround. That hasn't always been the case. During 1972-75, importers of world grain included the U.S.S.R., India, and the People's Republic of China, and much of the grain in the world market came from the U.S. In 1975, for example, U.S. wheat accounted for 43 percent of the wheat in world trade.

During that 1972-75 period, the major importers experienced wheat shortfalls of their own. The result was strong demand for wheat and other grains, and relatively high prices. Those prices encouraged farmers in the U.S. and elsewhere to plant more grain. As they did, the weather cooperated almost everywhere, and now the world has more grain than it can sell profitably. And American farmers are receiving the low prices to prove it.

Baby booms become hushes. Contributing has been a worldwide dip



in population growth. Slower growth rates are somewhat offset, though, by an improved world economy. Generally, the higher the income, the greater the demand for farm food products. Currently, the high-income developed countries account for almost 60 percent of all U.S. farm exports, while the developing countries pick up about one-third.

Growth in sales to higher income countries will be limited primarily to the expansion in demand that results from population growth plus shifts in consumer demands.

These shifts normally come with changes in income levels, and are fairly predictable. Normally, imports of feeds and feed grains—for meat-raising—rise as incomes rise.

Growth in demand for food grains will be in the low-income countries. In these places, as personal incomes rise, the demand for food also rises. Demand for feeds and feed grains will come later, after individual needs are satisfied.

Trend watchers. U.S. farmers will watch the trends carefully. So will the rest of the Nation, for farm product exports benefit everyone, both on and off the farm. Exports generate employment, incomes, and purchasing power. For example, farmers' purchases of fuel, fertilizer, and other inputs to produce commodities for export require additional economic activity in the manufacturing, trade, and transportation sectors.

And, with additional income earned from exports, U.S. farmers can buy more household goods, more farm equipment, more materials for the farm, and even a few "extras." In the end, more purchasing power is spread throughout the economy, while investment in plant and equipment blossom. The chain reaction from boosted foreign trade is felt in every part of the Nation.

[Based on *World Economic Growth and Demand for U.S. Farm Products*, by Arthur B. Mackie, Foreign Demand and Competition Division.]

Where Food Costs Less

While U.S. shoppers are spending more and more for food, beverages, and tobacco—along with nearly everything else, it seems—they're spending a smaller share of their incomes for these things than almost anyone else in the world.

Based on estimates of 1974 spending, economists have found that the U.S. and Canada allocated the lowest proportion of private consumption expenditures to food, beverages, and tobacco (nondurable goods)—less than $1 in $4 went for this purpose. However, the 1974 percentages in both countries were higher than in 1973.

Western Europe's spending, on the other hand, is not so simply broken down. The diversity of Western Europe is characterized by the variances in spending for nondurable goods, ranging from 26 percent in France to 47 percent in Portugal. As a general rule, the more industrialized and affluent countries in northern Europe spend a proportionately smaller share of their income on the grocery store items than less industrialized and less affluent neighbors to the South.

The estimate for U.S.S.R. spending by consumers is about 50 percent. For food alone, experts believe, Soviet people spend 35 percent of their income.

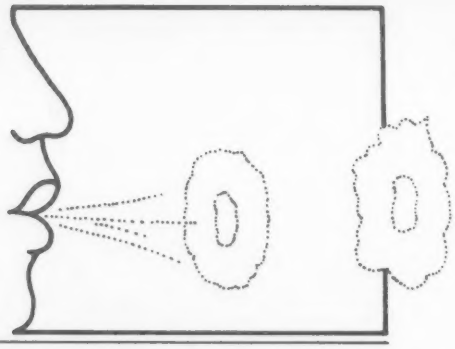
Most developing countries probably spend 60-70 percent of their income for food, beverages, and tobacco. Data are not available to permit an accurate evaluation, but it appears that developing nations with relatively high degrees of industrialization have expenditures substantially below 60 percent, while a country such as Bangladesh, with little industrialization, might spend well over 70 percent on nondurable items.

Meanwhile, some of the oil-producing countries, despite recent soaring in export earnings, may have large segments of their populations spending most of their earnings on nondurable items. The situation exists because of poor income distribution.

The more emphasis placed on producing durable consumer goods—say, appliances or furniture—the less spending on nondurable goods. In the Soviet Union, for instance, manufacture of durable consumer goods is given a low priority, and expenditures on nondurable items reach a high level.

[Based on special material from Reed E. Friend, Foreign Demand and Competition Division.]

The Antismoking Push: Stunting Tobacco Use



Although U.S. smokers puffed a record 618 billion cigarettes in the year ending June 30, the antismoking movement may be stunting per capita consumption.

Despite the 1-percent increase in cigarette sales over the previous year, there were 6.5 percent fewer smoked per person than in 1963, and 1 percent less than a year earlier.

Per capita cigarette consumption peaked in 1963—the year before the U.S. Surgeon General issued a report labeling smoking as a potential health hazard that may be linked to cancer.

The antismoking movement since 1964 concentrated first on encouraging smokers to quit and discouraging others from beginning to smoke. In recent years, the movement has broadened to champion "nonsmoker's rights" by seeking bans against smoking in certain public areas.

Historical battle. The controversy over smoking is hardly new.

The 1964 Surgeon General's report triggered a slow downward trend in per capita smoking, despite tobacco industry efforts to contest the report.

Beginning with Arizona in 1973, 30 States have banned smoking in certain public places. While many State laws restrict cigarette use from only a few areas, Minnesota enacted a ban in 1975 that forbids smoking in all public places and public meetings, except in designated smoking areas.

Nonsmoker's rights. Under Minnesota law, restaurants must set aside at least a fourth of their tables for nonsmokers, while hospitals must offer wards, and offices are required to arrange desks for nonsmokers. Fines of up to $100 may be levied against violators.

Courts have also played a role, with a New Jersey court ruling in favor of a nonsmoker who sued his employer to seek a smoke-free work environment.

The restrictions against smoking aren't supported only by those who don't use cigarettes. Last year, a Public Health Service survey found that more than half of the smokers interviewed wanted smoking restricted by banning the use from some places where it is now allowed. A third of the smokers said it's annoying to be near another cigarette smoker. Nonsmokers concurred on both counts by a substantially higher number.

Other factors. While the antismoking campaign seems to be a definite factor in the decline of per capita cigarette use, it isn't the only cause.

There are also higher prices and taxes. However, the retail cost factor, by itself, doesn't appear to be strong. Although prices are rising about 4 percent annually, the rate of increase trails the general 6-7 percent rate of inflation. As for taxes, four States raised cigarette levies this year, but the overall average for all States has stabilized at about 12½ cents per pack.

The changing public mood toward smoking can be felt in several instances that measure demand and consumer preference:

- Tobacco consumption per person has dropped 1 pound since 1970 to around 8½ pounds this year—a sharper drop than per capita cigarette use because of the trend toward making each cigarette with less tobacco.
- Manufacturers have largely completed the shift of consumers to filter cigarettes and full use of stems and sheet tobacco.
- Low-tar, low-nicotine cigarettes are finding an increasing acceptance, with their share of the market already exceeding one-fifth — and growing. Manufacturers are pushing these cigarettes through major advertising efforts. Tar and nicotine content is the major focus of health-hazard accusations.
- Large cigar consumption has declined 7 percent from year-earlier levels, and 42 percent from the 1964/65 peak. Only 5.2 billion large cigars were bought during the year ending in June—a record low, which will probably decline again this year.

Cheaper cigars falter. More expensive cigars have, however, consistently grown in consumption, while medium- and low-priced cigars have felt the greatest impact of the decline.

Little cigars have also been losing public favor, with a decline to about 2 billion annually.

- Pipe smokers' tobacco sales are also dropping, with consumption dipping to a record-low 52 million pounds in 1976/77. The decline has been especially steep since 1970. Prior to then, pipe smoking steadied as attention was focused on cigarettes.
- Chewing tobacco use is gaining, with consumption up 2 percent to 86 million pounds. Looseleaf and fine-cut chewing output has gained, but plug tobacco use has continued to

drop. The gain in chewing tobacco use may be associated with the upswing in employment in mining, construction, and other jobs where smoking is either prohibited or inconvenient.

• Snuff consumption may have stabilized after a long downward trend.

A greater impact. While these trends in tobacco consumption may not, by themselves, indicate the effect of antismoking movements, that impact may be far more significant when the pre-1964 consumption trends are applied to current market conditions.

For many years, cigarette price increases exceeded gains in the Consumer Price Index (CPI), thus depressing the sales potential. Since 1972, the CPI has increased faster than cigarette prices, thus providing an economic environment for expanding per capita consumption.

In fact, using data from the 1947-63 period that preceded the antismoking campaigns, 1975 should otherwise have been a boom year for the tobacco industry, with per capita consumption up by 20 to 30 percent above the level actually attained.

Slow decline ahead. The study suggests that the antismoking laws, along with the new militancy of nonsmokers, may have deterred a sizable jump in per capita sales, thus indicating a continued slow downtrend in smoking in coming years.

[Based on the speech, "Cigarette Sales Trends and the Antismoking Campaign," by Robert H. Miller, Commodity Economics Division, presented at the annual meeting of the National Tobacco Tax Association, September 27, in Vail, Colo.]

Tobacco: A Tale of "Holy Weeds" and Kings

Christopher Columbus "discovered" tobacco on October 12, 1492 on San Salvador, when he noticed natives wrapping offerings in large aromatic leaves.

While Columbus again failed to recognize a discovery, crewman Rodrigo de Jerez later puffed on an Indian-styled cigar to become the first European smoker.

The story of European exposure to the Indian's tobacco offers parallels to today's smoking issue.

European adventurers found that Indians almost everywhere puffed on pipes and crude cigars. Some even used snuff or plug tobacco.

Central America's Mayan leaders invented the political "smoke-filled room" and smokers are found in ancient Mayan art.

European scholars first declared tobacco to be a panacea for all ailments. But, since Indians also used tobacco in religious rites, the leaf was then linked with paganism.

In the mid-16th century, tobacco came to Europe. Andre Thevet introduced it to France in 1556 or 1557, and Sir John Hawkins probably brought it to England a decade later.

Europeans missed a note of warning: In 1528, Cabeza de Vaca reported meeting Indians who "intoxicate themselves with smoke and they give whatever they possess for it."

The early smoking trend met opposition, however. The Spanish Inquisition imprisoned a brazen public smoker for suspicion of satanism.

When the hapless smoker emerged from prison years later, smoking was common. Yet, he was lucky to be a Spaniard: Smokers faced the death penalty in Russia, Persia, and India, and Turkish ruler Murad IV regularly executed smokers—up to 18 in a day.

Tobacco did have its benefit, however. The struggling Jamestown colony found economic survival when it exported tobacco as a cash crop—making tobacco the colony's first business.

Despite opposition, smoking continued to catch on. In 1604, King James urged his subjects to forego the "vile and stinking custom" and refrain from "barbarous and beastly manners of the wild, Godless and slavish Indians."

Yet, the practical monarch then raised tobacco taxes by 4,000 percent, and sold licensed concessions for selling tobacco, and making or selling pipes.

Restrictions on public smoking, like taxes, also have historic roots. During the Civil War, the city fathers of Boston, faced with complaints about cigar smoking, set aside a "smokers' circle" area on Boston Commons to restrict use.

[Based on special material provided by Wayne D. Rasmussen, agricultural historian, National Economic Analysis Division.]

The Small Farm: A Forgotten Institution?

Worried about the life span of the small farm? You're in good company. Policymakers have been concerned for centuries.

Thomas Jefferson cared about this long-cherished tradition, as have other lawmakers long since gone. The interesting fact is that they all cared about small farmers, small operators, family farmers—call them as you will—for a myriad of reasons.

The definition of the "small farm" has taken several turns since the founding of the Republic. One ERS historian says: Today's small farm is often seen as "the place with poor land and poor prospects, the home of the people left behind . . ."

We now usually define the small farm as having less than $20,000 in sales. "The small farm in Government circles today," this historian says, "is defined as the farm in trouble."

Eyes on rural development. Obviously, a farm with only $20,000 in gross sales is not a very viable operation. The operator needs outside income to provide for his family. Thus, the current thrust of official policy to preserve the small farm is rural development—to create an attractive setting and job opportunities so that small farmers can live full lives where they are.

(Ironically, the proposed enforcement of laws limiting the size of farms eligible to receive water from Federal irrigation projects introduces anew the size-versus-sales qualification.)

At the same time, lawmakers want to upgrade the skills of the small farmer so that his operation will not suffer an unfair economic disadvantage.

The Food and Agriculture Act of 1977 provides a maximum of $20 million for this fiscal year and next for small farm research programs (around a fifth of the total) and for small farm extension programs (the balance plus administrative costs).

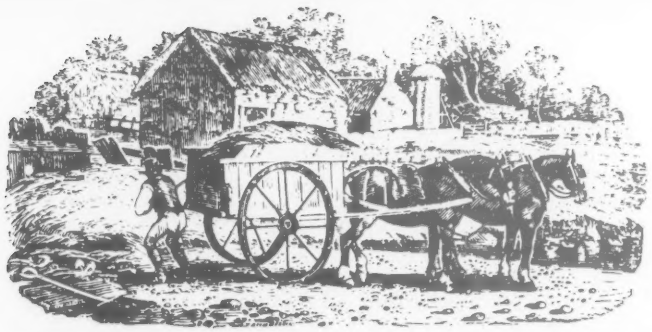
The fact that Congress gave the No. 2 spot to "family farms" in the new farm law indicates the legislators are keenly concerned about the issue.

"Essential to the social well-being." Section 102 of the law reads: "Congress hereby specifically reaffirms the historical policy of the United States to foster and encourage the family farm system of agriculture in this country. Congress firmly believes that the maintenance of the family farm system of agriculture is essential to the social well-being of the Nation and the competitive production of adequate supplies of food and fiber. . ."

The "historical policy" the law refers to is a far cry from today's small farm policy. In the 1800's and even before, a small farm was defined in terms of acres rather than income. And the laws in those days were intended to get the land into the hands of small owner-operators.

The concern was more than the welfare of the individual farmer, however. In the last century, small farms meant settlement, prosperity to the West, and profits to land traders and to railroad owners and others who had a stake in the new frontier.

Benefits to hinterlands. Settlement by small operators meant denser populations, busier communities, and more economic activity. Urban centers would benefit, too, said one Alabama Congressman in the late 1850's.



"It is the duty of Congress to help the cities to disgorge their cellars and their garrets of a starving, haggard, and useless population."

In distributing the public domain, legislators were generous in the 19th century. You could buy a minimum of 320 acres for $2 an acre under the Land Act of 1800.

The Graduation Act of 1854 progressively lowered the cost of unsold lands to 12½ cents an acre for parcels that had been on the market for 30 years or more. Finally, in 1862, the Homestead Act allowed settlers to claim 160 acres after 5 years residence and payment of filing fees.

In practice, the land laws were not entirely beneficial to the small farmer. Ranchers and mining and timber companies used the laws to acquire huge chunks of the public domain.

Research and education. In the mid-1800's, Government began to focus on research and education to improve the lot of the small farmer. The Hatch Act of 1887 authorized funds for experiment stations. After the turn of the century it was followed by the Smith-Lever Act, which established the Cooperative Extension Service.

After World War I, farm prices shot up, and Congress paid little attention to the small farmers who were falling behind. Instead, lawmakers were concerned about the welfare of the entire farming sector. But with the Great Depression of the thirties, legislators had a change of heart.

Money for farmers. The New Deal's economic policy for agriculture, among other things, included a system of expanded credit supervised mainly by the Farm Credit Administration. It provided critical relief to thousands of producers faced with credit problems during the Depression.

The chore of helping people at the bottom of the heap fell to the Farm Security Administration, offering a package of credit plus management planning and technical services to get small operators back on their feet. The goal was to improve their tenure status and increase their production.

With the entry of the U.S. into World War II, the Farm Security Administration put even greater emphasis on the role of the small farm as a producing unit and a basic component of American agriculture.

Too much of a good thing. In the 30 years after 1940, American agriculture experienced one of its most dynamic periods of growth. Tractor numbers more than tripled . . . spending for fertilizers and lime rose over 700 percent . . . and expenditures for pesticides increased more than twentyfold. Result: excess production capacity, surpluses, price support programs, and production controls.

The Government's answer to sagging farm incomes, however, was a package designed for operators with goods to sell. The greater an individual's sales, the greater was his advantage. The price support program was essentially a big farm program to the extent that size was measured by sales or production. Federal programs of the fifties and sixties were actually helping to drive small farmers out of business.

By protecting prices, the programs encouraged farmers to take full advantage of the postwar technological boom and to compete fiercely for land. The upshot was an increase in farm size as big operators swallowed their smaller brethren.

The vanishing farmer. Between 1940 and 1970, farm numbers shrank from 6.1 million to 2.3 million. Value of farm property grew sixfold. Average farm size more than doubled. Operators unable to make the adjustment vanished in droves.

In the mid-forties, Congress was not alarmed about the disappearance of farms but it was interested in providing incentives for displaced farmers to get jobs in the city. After the riots of the 1960's, however, Congressmen changed their tune.

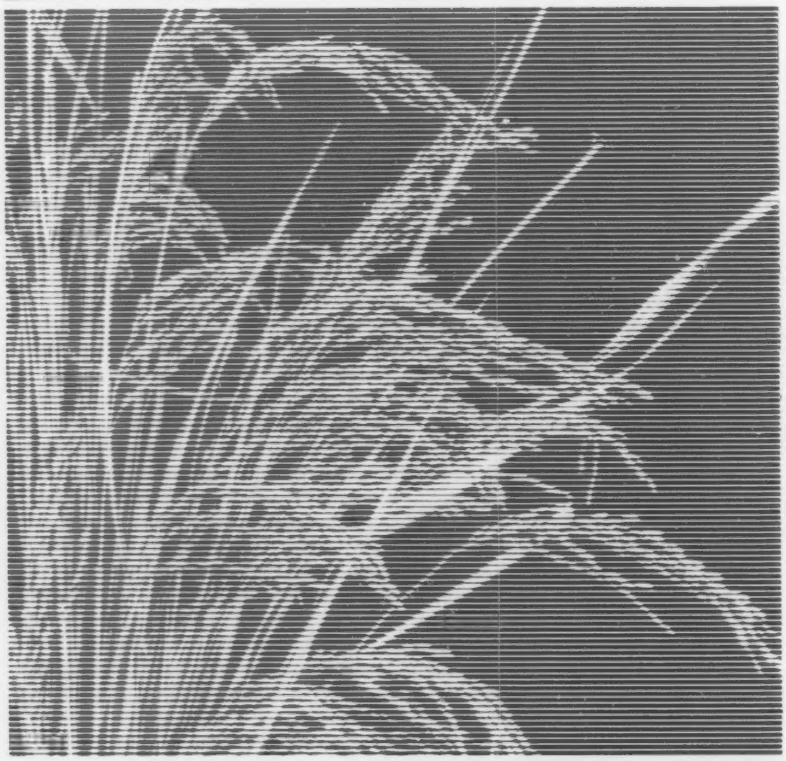
Continued urban growth was no longer desirable. The main goal was no longer to entice small operators to leave the countryside. But neither was the goal to get small farmers to join the agricultural mainstream. Since the mid-fifties, in fact, farm policy has placed less emphasis on the production potential of small farms in favor of the broader issue of rural development.

Now in vogue is the idea that the small farm is a part-time operation. Rural services need to be upgraded at the same time, and off-farm employment opportunities should be encouraged.

[Based on "Federal Policy and the Small Farm, an Historical View," paper by David Brewster, National Economic Analysis Division, presented at Small Farm Policy Workshop, Winrock, Arkansas, Oct. 16-18, 1977.]

Commodity Profile:

Rice Rides A Price Roller Coaster



Large rice stocks are causing major problems for farmers.

The U.S. started the current crop year on August 1 with 140 million cwt. (rough equivalent) of rice in supply (carryover plus production). That's after a record-setting 1976/77 beginning of 154 million cwt. This year's reduction in supply stems mostly from farmers' efforts to cut back on rice to bring production more in line with changes in market prices.

They trimmed acreage in 1976 by 11 percent in response to faltering rice prices. Then they chopped it another 12 percent last spring, mostly because of lower prices, but growers in California also responded to the reduced supply of irrigation water brought on by the drought.

Smaller crop. The size of the 1977 crop dropped by more than the acreage reductions. Last year, because of high yields offsetting planting curtailments, production was only 9 percent below 1975. This year's projections are for a crop about 15 percent smaller than last year's.

The 1975 crop is the one that holds the record. It was 128 million cwt. (rough) on 2.8 million acres—the most ever planted. On August 1, 1976, carryover stocks bulged bins with 37 million cwt.

Rice prices have tumbled because of the oversupply, but some relief is in sight. With the 1977 smaller crop, prices gained some strength this summer, and it's expected this season's average price will range from $7.25-7.75. Compare that with 1973, an unusually high-priced year, when farmers were getting over $15 a cwt. —in some cases, prices topped $17. Those higher prices encouraged more rice plantings, eventually resulting in record production. The following year, prices stayed above $10, and farmers planted 2.8 million acres. When the prices began taking a nosedive more recently, cutbacks started.

Ride a rocket. Most of the drastic ups and downs of rice growing are related to foreign trade, which rocketed in 1972/73. That year, world production slipped 4 percent, and demand for American rice rose.

For the past decade, the U.S. has accounted for about a fourth of total world trade in rice. Paradoxically, the U.S. is a small producer, compared with the People's Republic of China, India, Indonesia, and others. In fact, American farmers account for only about 1 or 2 percent of world production in a typical year. But eating habits explain why so much of our rice goes abroad.

Eaten where it's grown. Rice in much of the world is a primary food. About half the population relies on it as a staple. So the countries that grow it keep it. Not so in the U.S., though, where per capita con-

sumption—although rising a bit—is only about 7-8 milled pounds, and rice is often considered a minor crop.

It's grown almost exclusively in five States: Arkansas, Louisiana, Texas, California, and Mississippi. But it's not considered minor to those who produced nearly $800 million worth of it last year.

Income in 1976 included large deficiency payments. The payments —the difference between a target price ($8.25 per cwt.) and the average market price over the first 5 months of the marketing year ($6.55 per cwt.)—were paid on allotment production and totaled nearly $128 million.

The program goes on. The payments were authorized by the Rice Production Act of 1975, a 2-year program that runs out this year. But most of the major provisions of the rice program have been picked up in the new farm act.

U.S. rice farmers have been helping increasingly to satisfy world demand. In three decades, annual U.S. exports climbed from less than 12 million cwt. to 66 million cwt. in 1976/77.

A large part of the foreign shipments are under P.L. 480, the Federal foreign food aid program. Out of the 66 million cwt. shipped in 1976/77, over one-third was under P.L. 480.

Even with the brisk foreign trade, at-home consumption of rice is still important, taking about 40 percent of total consumption. Americans use rice as a direct food, in processed foods, and in making beer.

The use of rice for beer is increasing. It took about 5 million cwt. in 1973/74, and about double that amount last year. One reason for the boost is the relatively high price of competing ingredients such as corn grits normally used in beer production. Another reason is the increase in the volume of beer produced by brewers who use rice.

Eating it up. A more important use is for direct food. About 60 percent of domestic rice is consumed this way, with most of that going to long-grain milled. Other rice is parboiled or precooked.

Processed foods take the bulk of the remaining rice used for food. Cereals account for most of that, with soups, baby foods, mixes, and other products taking smaller shares.

Although food use in the 1976/77 marketing year may rise 5 percent from 1975/76 consumption of 28 million cwt., domestic consumption isn't where farmers are looking for growth. For that, the export market is the place of promise.

With the strong demand for American rice in world trade, farmers have expanded production. The fastest way to do that was to expand acreage and the Mississippi Delta region had the space.

Farmers there, especially in Mississippi, Arkansas, and northeast Louisiana, have 2.5-2.9 million acres suitable for rice, in addition to the land already planted to rice. If the land is used in a normal rotation —1 year rice, 2 years soybeans or other legumes—production could be expanded by 45 million cwt., assuming yields of 4,500 pounds per acre.

What is needed—more than acreage expansion—is a place to sell the oversupply of rice that already exists.

[Based on material compiled by the Grains and Feed Program Area, Commodity Economics Division.]

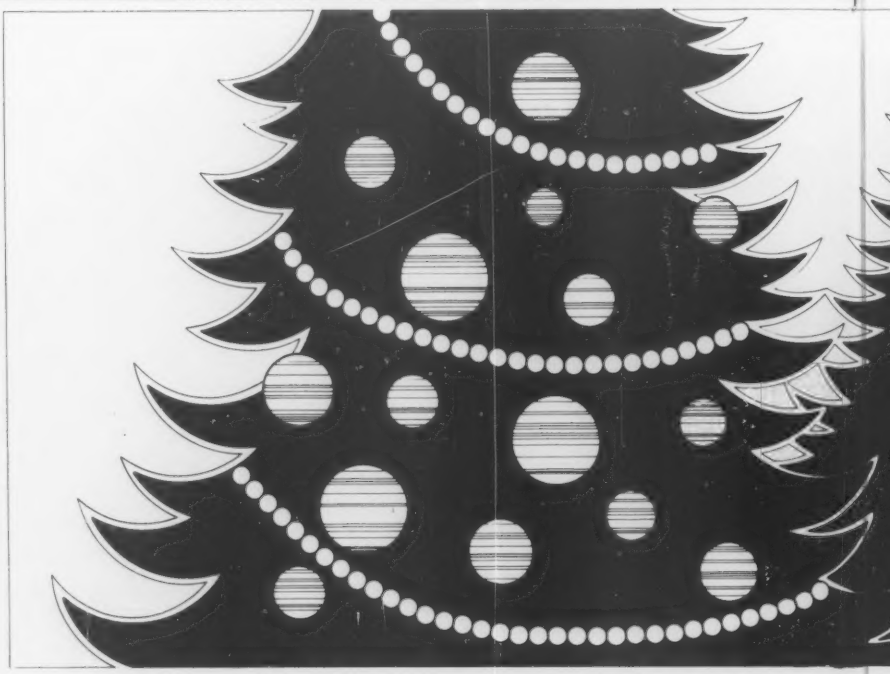
COMMODITY PROFILE:	RICE
Production	About 100 million cwt. in 1977, 15 percent below 1976
Farm value	Estimated $726-$776 million, 1977
Foreign trade	The U.S. is the No. 1 rice exporter, shipping 66 million cwt. in 1976/77.
Trends	Increasing foreign sales plus greater domestic consumption could encourage more rice production in the next few years.

The Christmas Tree: Agriculture's Holiday Symbol

This year's Christmas trees will do more than bring joy to millions of American families—they'll produce a nice profit for Christmas tree farmers, as well.

Without doubt, 1976 sales of natural Christmas trees—with a wholesale value of about $100 million and a retail value of $240 million—were among the best ever recorded. And, according to the 4,000-member National Christmas Tree Association, all signs point to this year's sales being even better, maybe the best ever. Most wholesalers were sold out of trees as far back as July.

The only sour note for Christmas 1977 might be the emergency quarantine placed on Christmas tree farms (as well as pine and spruce forests and tree nurseries) by USDA in parts of New York and Vermont in October.



Effect on sales. However, according to industry spokesmen, the quarantine will have only a moderate effect on national sales. Quarantined trees that passed Federal and State inspections were shipped to other parts of the country, as in normal years, and those that didn't were sold within the infected areas.

The quarantine was enacted as a safeguard against the spread of the European strain of scleroderris canker, a disease which infects both mature and young trees and can kill a contaminated stand of trees within 3 years.

Of course, such problems are nothing new to the Nation's 10,000 Christmas tree farmers. Like the producer of any other crop or forest product, they're constantly exposed to the threat of insect attacks and disease.

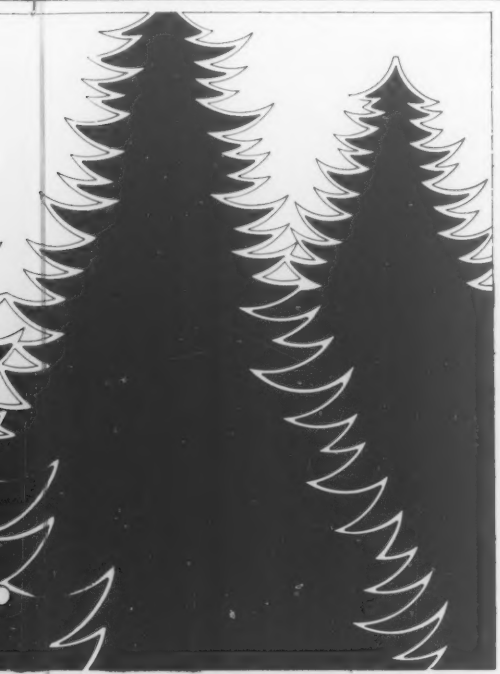
Greater risk. However, unlike most other agricultural producers, the Christmas tree growers' risk from natural disaster is compounded by the fact that Christmas trees can only be harvested on a rotation of every 6 to 12 years—depending on the region and species—while most crops are harvested annually.

Because it takes such a long time to produce the green beauties, those entering the business must be endowed with two essential qualities: patience and the financial reserves to wait many years before they receive their first revenues.

This is why most growers have other full-time occupations, with the production of Christmas trees being more of an avocation, representing a relatively small or supplemental part of their total income.

Christmas tree farms range in size from 50 to 5,000 trees, with most producers raising between 800 and 1,500 trees. Currently, about 85 million trees are under management on some 450,000 acres in the U.S.

Where they're grown. Thirty-four States now produce the 30 million trees that are cut for Christmas each year, with three more—Alabama, Louisiana, and Arizona—just getting into the act. The leading producing



areas are the Lake States, the Northeast, and the Northwest.

Although about 40 types of Christmas trees are grown in this country, a half dozen species account for more than 75 percent of all commercially developed trees.

The big six include Scotch pine, Douglas fir, balsam fir, cedar, spruce, and red pine. Other popular trees are Austrian pine, noble fir, and white pine.

Scotch pine, long America's favorite Christmas tree, has been falling off somewhat in popularity, due to inroads made by Douglas and balsam firs.

What types are grown? Generally, Christmas tree farmers produce the trees that grow best in their area—subject to other considerations. For instance, Norway spruce may thrive, but the market for this species is not good. Also, the fastest growing tree may not be the most shapely.

For the most part, Christmas trees are grown in rural areas on soil that is unsuitable for other types of crops and on slopes too steep for agricultural production. The trees help prevent soil erosion, provide an added habitat for wildlife, and improve the scenic beauty of the land.

Christmas tree farmers reject the notion that using a natural tree for home decoration is environmentally unsound, contending that there's no way the little green tree sitting in your living room would ever turn into a forest giant.

Decorative qualities. The evergreens that are grown as Christmas trees are chosen for their decorative qualities—color, shape, thickness of branches, and odor—and have hardly any value as commercial timber.

In addition, the Christmas tree industry provides year-around jobs in areas where others might not exist. About 12,000 people work full-time as growers, wholesalers, and retailers. Another 100,000—mainly high school and college students—work part-time during spring planting, shearing, pruning, and harvesting. During the Christmas season, some 30,000 people are involved in retailing operations.

Although most Americans think of the natural tree as being the true symbol of Christmas, its artificial competitor has made striking inroads.

Country Trimmings

Before the days of modern glass baubles, blinking electric lights, and multicolored aluminum tinsel, Americans trimmed their Christmas trees with natural decorations—namely, agricultural products.

Early-day trees were gaily garnished with strings of popcorn and cranberries, gilded nuts, sugar candies, cookies in the shape of angels, hearts, and animals, and delicious-smelling pomander balls—apples studded with whole cloves and dusted with cinnamon.

Straw and cornhusks were used to fashion clever angels and dolls, and scraps of wood were carved into attractive figurines. And then, of course, there were pine cones and—frighteningly—lighted candles.

Although the decorations have changed over the years, the tree endures as the symbol of Christmas—a tradition which is older than Christianity and is not exclusive to any one religion. The little evergreen engages our senses of sight, touch, and smell and evokes a mood of holidays from long ago.

Natural vs. artificial. The latest natural tree industry survey shows that about a third of all U.S. households have a natural tree each Christmas, another third have an artificial tree, and the remaining third have no tree at all.

However, natural trees have always held a slight edge over their plastic and aluminum rivals, and, especially in the past few years, the popularity of real Christmas trees has been increasing.

For example, more than 70 percent of the wholesalers and retailers of natural trees surveyed in 1976 agreed that the demand for artificial trees was slipping and that "consumers are insisting on a quality cut tree." The survey also indicated that despite the high cost of larger trees, their sales were up and that in several parts of the country, consumers were buying their trees earlier, with fewer purchases after December 19.

Retail cost. Consumers can expect to pay between $1.50 and $2.50 per foot for their tree this Christmas, depending on the quality and freshness of the tree.

Prices vary slightly from region to region, with the cost of freight being a major factor. According to an industry spokesman, the freight bill can add as much as $1 to the price of a tree, and in certain high-demand areas, such as New York City, it can tack on as much as $2 per tree.

Higher prices for labor, land, raw materials, and property taxes are other reasons for the costly pricetags on natural Christmas trees. The number of trees lost during shipment is another factor.

Nevertheless, for millions of Americans, the holiday season just wouldn't be the same without a live Christmas tree, and the cost seems relatively unimportant when compared with the joy and wonder the tree brings.

[Based on special information from Ray Stanton, Natural Resource Economics Division; Richard T. Marks, Extension Service; and Mary Garity, Philip Jones, and Arlene Frelk, The National Christmas Tree Association.]

Consumer Tips on Trees

Natural Christmas trees are as individual as the decorations each family puts on them. The 40 different species that are sold each year come in almost every size and shape.

All have good endurance qualities, and, if properly cared for, natural trees are not fire hazards. The National Christmas Tree Association offers a number of suggestions about the selection, care, and disposal of natural trees.

The basic rule of thumb is to buy a fresh tree and keep it fresh.

There are several ways to determine freshness. Check the condition of the needles—fresh needles bend rather than break if bent gently. But remember that in very cold weather, moisture inside the needles may freeze, making them brittle. And spruce needles are more brittle naturally than those of fir or pine trees.

Another test for freshness is to bounce the stump end of the tree firmly on the ground. If dry needles fall off in substantial numbers, select another tree. However, it's natural for some needles to lodge among the branches since many trees shed their inner needles in the fall. This is a normal process in all pine trees, for example, and is not a sign of an old or dead tree.

The third way to check for freshness is to examine the stump of the tree: Fresh stumps are often sticky with sap, rather than smooth and dry.

Care for the tree as conscientiously as for cut flowers. Let the tree remain outdoors or on a cool porch or patio until ready to decorate. If possible, bring the tree to a partially heated area, such as a basement or porch, the night before decorating.

Before putting the tree in the tree stand, make a fresh cut in the trunk. This removes possible clotted resins that could prevent the tree from absorbing water.

Keep the tree stand filled with fresh water, adding to it daily. Trees are thirsty and may absorb from a pint to a gallon of water each day, depending on their size and condition.

And remember, if the water level is allowed to drop below the trunk, a seal will form and the tree cannot absorb water. As long as the tree keeps drawing water, it will remain fire resistant.

The tree should be placed away from fireplaces, radiators, TV sets, and other heat sources. When decorating, make sure there's no exposed wire or frayed insulation on the light strands, and no cracked or broken light sockets. And never use lighted candles.

After the holidays, the tree can still be useful. It can be set upright in the yard and used as a bird feeder. Orange slices and popcorn will attract the birds, and branches smeared with peanut butter and sprinkled with bird seed and bread crumbs are a special treat.

Since the tree is biodegradable, its branches can be removed and used as mulch in the garden; the trunk can be used for firewood or chopped for mulch. Never burn a bundle of green branches in the fireplace, however, as this could be a fire hazard.

The Educated Farmer

Faced with rapidly changing technology and economic complexities, today's American farmers are seeking more education to be better equipped to cope with modern demands.

While their forebearers often prospered with a minimum of education and a maximum of hard work, modern farmers must grapple with problems ranging from the efficient management of mechanized operations to crucial marketing decisions based on international economics.

As a result, farmers and farm managers attained a median education level of 12.1 years in 1975—only a half-year lower than the national average for all males between ages 25 to 64. For the first time, more than half of them had attained a level equal to high school graduate.

A quarter-century ago. In 1950, less than a fifth of farmers and farm managers had at least 4 years of high school exposure, while better than two-thirds had 8 years or less of schooling. Only 1.5 percent held college degrees.

By 1975, the portion of college-educated male farmers and farm managers increased better than four-fold to 6.7 percent, while those with 8 years or less of school shrank to less than 30 percent. Moreover, among younger farmers and farm managers aged 25 to 44, the percentage holding college degrees boomed from 1.6 in 1950 to 11.6 in 1975.

Behind the figures, a significant shift occurred in the nature of farming which may have enhanced the upward trend in education.

Between 1950 and 1970, nearly all educational categories of male farmers and farm managers experienced a decline in numbers, as mechanization and technological development reduced the need for labor.

Educational edge. However, in higher educated categories, the loss was proportionately smaller, and the number of farmers who had completed 4 years of high school even increased between 1950 and 1960.

Between 1960 and 1970, college education became increasingly popular. The trend sharply accelerated between 1970 and 1975 when the number of farmers and farm managers with 4 years or more of college rose 62 percent. In numbers, the increase was from 45,000 in 1970 to 73,000 in 1975.

Coupled with the decline in numbers of farmers and farm managers having less than 4 years of high school, the trend strongly suggests that modern farming is not an occupation for the uneducated.

A complicated business. The growing complexity of agriculture seems to have contributed greatly to educational increases. The technological revolution, with its requirements for scientific and managerial skills, has made farmers with low levels of education less competitive.

Higher education trends are especially prevalent among the new generation of farmers who are beginning to replace the less-educated 44- to 65-year-old generation, which is dwindling through either retirement or displacement into nonfarm work.

Phasing out. The older group decreased 3 percent in total numbers from 1970 to 1975. Displacement, rather than retirement, may well have been at least a contributing factor, since only the higher education categories in this age bracket gained in number. This, in turn, may suggest that better educated farmers are reaping a competitive edge through their training.

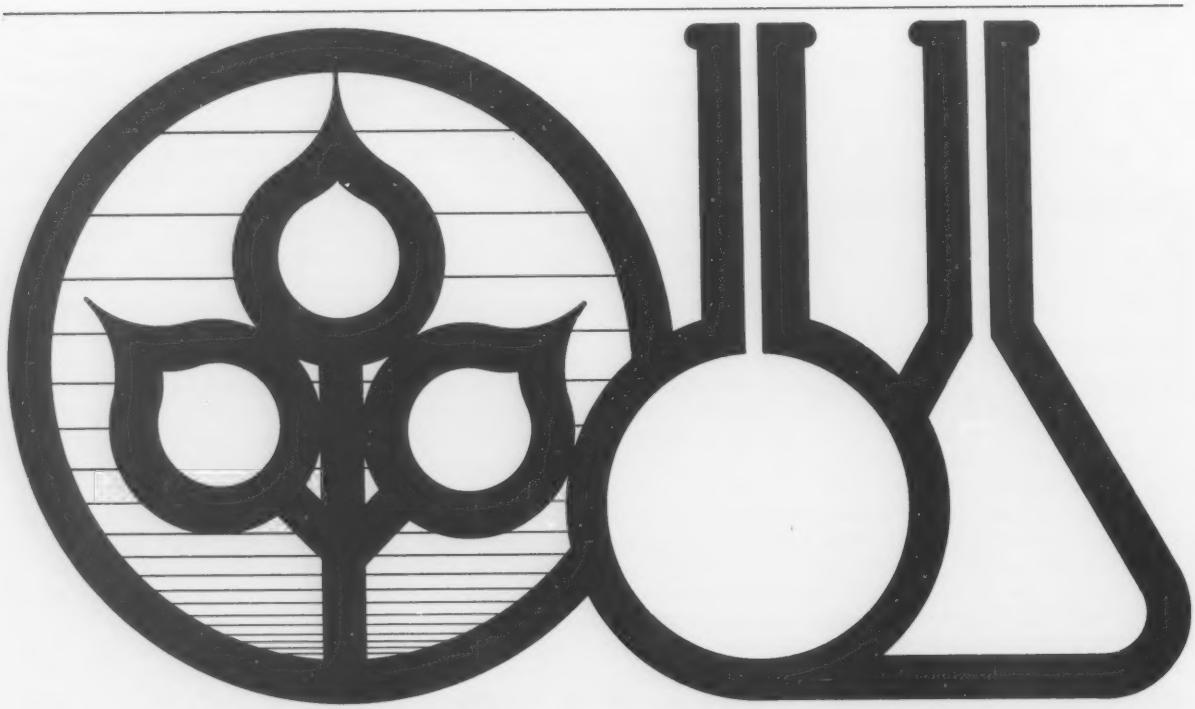
The trend toward higher education not only appears to be continuing, but there are indications that more and more farmers will seek advanced degrees.

In 1975, 1.4 percent of farmers and farm managers had attained 5 or more years of college education—post-graduate work normally in pursuit of a master's or a doctorate degree.

Post-graduate farmers. Considering that only 25 years prior, only 1.5 percent had 4 years of college or more, this means that farmers holding advanced degrees today are no rarer than those with college degrees a quarter of a century earlier.

[Based on unpublished materials by William L. Flinn and Robert D. Munoz, The Ohio State University, Columbus, Ohio, in cooperation with the Economic Development Division.]

Farming and Science: A Stronger Partnership



As the 21st Century looms closer, the Food and Agriculture Act of 1977 provides more money for the scientific farming know-how needed to meet expanded food and fiber needs of future generations.

Deep within the new farm act, signed into law September 29, is the National Agricultural Research, Extension, and Teaching Policy Act of 1977. The law-within-a-law authorizes increased Federal expenditures for research, extension, and State Agricultural experiment station programs. The total could grow to $1.35 billion by 1982, a nearly 50-percent boost over the fiscal year 1978 authorization.

Besides increased funding for the land-grant colleges and universities, the act creates research projects to develop new crops and improve agricultural technology. The quest for new energy sources plays a major part, and special emphasis is on the sun.

The sun shines. As nonfossil fuels—those other than the nonrenewable oil, coal, or natural gas supplies—become the chief alternatives to severe energy shortages, solar power shines for agriculture. In a sense, of course, farmers have always made use of solar energy. They often let their crops field dry, weather permitting, rather than use natural gas for heat; simply allowing crops to ripen in the field is a use of the sun; and considering that wind energy is a result of solar heat, windmills have been a form of solar energy for farmers for centuries.

Today, however, different applications of solar power are being researched, including solar-powered grain dryers, solar heating plants, and solar hot water and irrigation systems, among other devices for the farm.

The new agriculture law authorizes $20 million a year through fiscal year 1981 for States to establish solar model farms and solar demonstration projects. From these, data

will be compiled and reports prepared. Also, each farm will be open to the public for tours, so people can see first-hand what solar operations are like.

Financial help. Individual farmers may get help financing solar projects or other nonfossil energy systems of their own through loans that may be granted under a Farmers Home Administration program.

Another form of solar power, biomass energy, is taken up in the farm act. Biomass energy—from any crop or forest product used for fuel—may replace nonrenewable fuels and chemicals (chemicals with a petroleum base) in some cases. A competitive grant program will be established by the Secretary of Agriculture for research and demonstration of biomass and solar energy applications.

Hydrocarbons — those chemicals such as alcohol and methane that are compounds of hydrogen and carbon —are also being used more. The farm act allows up to $24 million in grants to colleges and universities over the next 5 years for research on producing and marketing hydrocarbon fuels and other materials made from agricultural products. Up to $15 million in private loans can be guaranteed by the Commodity Credit Corporation to finance four pilot projects to make industry hydrocarbons from forestry and agricultural products.

Other funding areas. Besides energy projects, the new law provides increased funding for many areas of concern to agriculture.

• Human nutrition. The Department of Agriculture will be taking on nutrition research as a separate and distinct mission.

• Animal health. Colleges and universities with accredited veterinary schools are eligible to receive up to $25 million a year for research on animal health and diseases. An additional $15 million a year will be available to support research on specific national or regional animal health or disease problems.

• Small farm help. The small scale farms—those with gross sales under $20,000 yearly—are the chief beneficiaries of a research and extension program that may receive up to $20 million each year. The aim of the project is to upgrade small farm operations.

• Research and extension. More money specifically earmarked for continuing agricultural research and extension is to be appropriated for the 1890 land-grant colleges. The new funding formula may increase money for extension work and research at the colleges beginning in fiscal year 1979.

Funding levels tend to shift each year, but using already-approved figures for fiscal year 1978, the farm act alone provides nearly $10 million for extension work, and almost $16.4 million for research, in addition to funding from other appropriations.

• More dollars for research. Research facilities, funded under separate legislation, will get more money under the farm act. The law requires that each State experiment

station be granted either $100,000 or 10 percent of primary funding, whichever is greater. This extra money is to be used for purchase of equipment, supplies, and land; and for construction, alteration, or renovation of buildings. However, grants exceeding $50,000 will be subject to a matching funds requirement, meaning that the institution receiving the Federal funds has to come up with an equal amount from other sources.

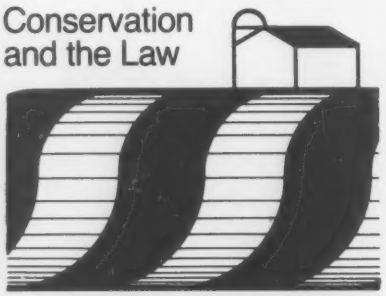
Also, each veterinary school and research facility will receive a grant equal to 10 percent of the Federal animal health research funds it receives.

• Veterinary schools. A shortage of veterinary schools exists in the U.S., and the new farm act tries to ease the problem. States will receive funds on a 50-50 matching basis to finance construction or expansion of veterinary schools. Preference will be given to States that combine forces to provide veterinary schools where there are now no schools. For example, if two States—one with a veterinary school and one without—team up to provide education to people of both States, their application for funds may be considered above single States acting alone.

The Food and Agriculture Act contains many other provisions affecting existing grant and education programs, and some provisions that start new ones. But generally speaking, the stress on research to advance farming in America is stronger than ever.

[Based on special material from Stephen D. Lurya, Natural Resource Economics Division.]

Conservation and the Law



Agricultural conservation receives renewed emphasis with the Food and Agriculture Act of 1977. Conservation problem-solving on farmland will be the focus of the Agricultural Conservation Program (ACP), administered by the Agricultural Stabilization and Conservation Service (ASCS).

The program, which dates back to the 1936 Dust Bowl period, has often come under fire because it sometimes seemed to emphasize conservation practices that tend to increase crop yields over other farmland conservation or environmental improvement needs. To a certain extent, such criticism is inevitable, because higher yields are one result of effective maintenance or enhancement of farmland.

Nevertheless, ASCS will be making a concerted effort this year to focus the program on high-priority conservation or pollution problems. The ACP will also be used to deal extensively with long-term conservation practices, many of which are already underway.

While some parts of the ACP were changed a little by amendments to basic legislation, as contained in the new 4-year farm act, the basic purpose remains the same: To assure the continued supply of food and fiber necessary for America and the world, farmers are encouraged to work at environmental conservation and farmland improvement. The ACP helps to achieve the conservation goals by sharing with the landowner the cost of establishing or maintaining approved conservation practices.

The ACP is run through a network of county Agricultural Stabilization and Conservation (ASC) committees with working farmers as members. These committees design the county conservation programs that help solve problems.

A new two-step procedure for that work was started for the 1978 ACP. It requires county and State ACP development groups to (1) identify and (2) assign priorities to conservation or environmental problems, before specific practices are authorized. The first step is already operating.

In previous years, ACP could share 50-75 percent of the average cost of an approved conservation project. Beginning this year, the ACP committees have more flexibility in setting share rates, with the range of possible Federal cost sharing 30-90 percent.

The total available for ACP may, or may not, change. It depends on Congress. For fiscal years 1977 and 1978, Congress has authorized up to $190 million each year for ACP.

Another shift in the amendments to the basic legislation is that greater emphasis is being placed on coordinating ACP cost-sharing programs with environmental regulations such as those designed to control water pollution problems on farmlands. Typical problems are animal waste runoff and sedimentation of streams from soil erosion.

[Based on special material from Robert F. Boxley, Natural Resource Economics Division.]

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Vegetables: production of, 1/12, 4/13.

W

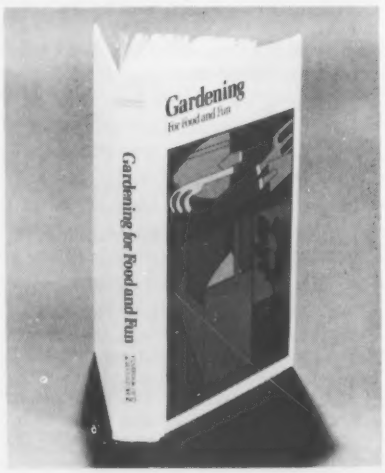
Wastewater: treatment of, 10/18 (see also Federal Water Pollution Control Act).
Weather: and agricultural forecasting, 1/5; and climatic changes, 2/12; and land values, 3/12; freezes and droughts, 4/12; California drought, 5/10; economic impacts of, 6/4.
Wheat: production and sales of, 1/10, 4/11, 5/15, 10/4, 11/8.

1977 Yearbook of Agriculture

A focus on home gardening highlights this year's Yearbook of Agriculture. Titled *Gardening for Food and Fun*, the hardcover book has 400 pages of color photos.

The book is organized into four sections: "Introduction to Gardening," "Home Garden Vegetables," "Fruits and Nuts," and "Home Food Preservation."

Copies are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price: $6.50 (check or money order).



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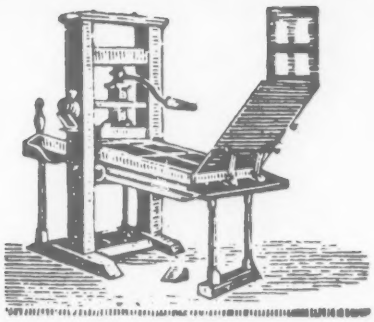

Single copies of the publications listed here are available free from Farm Index, *Economic Research Service, Rm. 1664-So., U.S. Department of Agriculture, Washington, D.C. 20250. However, publications indicated by (*) may be obtained only by writing to the experiment station or university. For addresses, see July and December issues of* Farm Index.

Water Carriers and Inland Waterways in Agricultural Transportation. Floyd D. Gaibler, National Economic Analysis Division. AER-379.

Between 1960 and 1974, barge shipments of U.S. major grains increased over 172 percent. Meanwhile, barge capacity and towboat horsepower were also boosted significantly. This report explores the renewed interest in inland transportation, and the costs and future growth that might be expected. Policy issues that could affect agricultural transportation by waterway are also discussed.

Alternative Retail Beef-Handling Systems. Lawrence A. Duewer, Commodity Economics Division, and Terry L. Crawford, National Economic Analysis Division. ERS-661.

Traditionally, packers deliver beef carcasses to retailers, who then cut them into retail cuts. But this study finds that method may not be the most economical. Seven methods of handling beef by retail firms are explored, considering the number and size of stores per firm and the distance from the packer. One of the greatest problems in changing methods of meat handling, the study reports, is in consumer acceptance. This problem, too, is discussed.

World Economic Conditions in Relation to Agricultural Trade. Economic Development Division. WEC-12.

World trade volume in 1976 rose from the doldrums of 1975, and projections look to another 8-9 percent rise in 1977. Agricultural trade plays a major role in the international buying and selling of goods. In six articles in this book, ranging from economic prospects in the developed countries, to the developing countries, to the U.S. farmers' contribution to the balance of payments, the world trade situation is analyzed.

Mechanical Harvesting of Wine Grapes. Stanley S. Johnson, Commodity Economics Division. AER-385.

The pace at which mechanical harvesting of California wine grapes has replaced hand labor has slowed considerably. This report shows that the effort now is to find a way to make mechanical harvesting economical, while maintaining high grape quality. Much depends, the authors say, on solving current problems with quality, and on the availability of labor.

New Manufacturing Plants in the Nonmetro Ozarks Region. John A. Kuehn and Curtis Braschler, Economic Development Division. (In cooperation with the University of Missouri Agricultural Experiment Station.) AER-384.

The Ozark States' nonmetro areas have been the center in recent years (the study covers 1967 to 1974) of new manufacturing plant construction. New plants have gone up in these areas faster than in metro regions. In fact, most of the new plants were located in communities with less than 25,000 population.

Energy and U.S. Agriculture: Irrigation Pumping, 1974. Gordon Sloggett, Natural Resource Economics Division. AER-376.

U.S. agriculture has grown increasingly reliant on irrigation, a process that takes massive amounts of energy—260 trillion Btu's in 1974, costing an estimated $594 million. This report breaks down where that water is used, and how much different regions pay for irrigation.

Angola's Agricultural Economy in Brief. Herbert H. Steiner, Foreign Demand and Competition Division. FAER-139.

This booklet starts with a short summary of Angola's overall economy, including descriptions of climate, soils, vegetation, and other pertinent information. Following that discussion is a report on the agricultural sector as it was prior to the November 1975 independence. Principal crops and exports are listed.

Commodity Program Provisions Under the Food and Agriculture Act of 1977. James Johnson and Milton H. Erickson, Commodity Economics Division. AER-389.

New agriculture legislation for 1978-82 crop years affect most major crops, and some minor ones, in a myriad of ways. This report takes an indepth look at the provisions affecting commodities. Also sum-

marized are miscellaneous provisions affecting programs such as grain reserves, set-asides, and bee and dairy indemnity programs.

The U.S. Cash Grain Trade in 1974: Participants, Transactions, and Information Sources. Richard G. Heifner, John W. Helmuth, and Bruce L. Wright, National Economic Analysis Division; and James L. Driscoll, Mack N. Leath, and Floyd F. Niernberger, Commodity Economics Division. AER-386.

Who grain buyers are, where they are from, and how they make their deals, are the subjects of this report, which highlights the importance of radio and teletype reports, along with other information channels, to the U.S. grain industry.

Addresses of State experiment stations:

A ready reference list for readers wishing to order publications and source material published through State experiment stations.

STATE	CITY	ZIP CODE
ALABAMA	Auburn	36830
ALASKA	Fairbanks	99701
ARIZONA	Tucson	85721
ARKANSAS	Fayetteville	72701
CALIFORNIA	Berkeley	94720
	Davis	95616
	Parlier	93648
	Riverside	92502
COLORADO	Fort Collins	80523
CONNECTICUT	New Haven	06504
	Storrs	06268
DELAWARE	Newark	19711
DISTRICT OF COLUMBIA	Washington	20008
FLORIDA	Gainesville	32611
GEORGIA	Athens	30602
	Experiment	30212
	Tifton	31794
GUAM	Agana	96910
HAWAII	Honolulu	96822
IDAHO	Moscow	83843
ILLINOIS	Urbana	61801
INDIANA	West Lafayette	47907
IOWA	Ames	50011
KANSAS	Manhattan	66506
KENTUCKY	Lexington	40506
LOUISIANA	Baton Rouge	70803
MAINE	Orono	04473
MARYLAND	College Park	20742
MASSACHUSETTS	Amherst	01003
MICHIGAN	East Lansing	48824
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NEW JERSEY	New Brunswick	08903
NEW MEXICO	Las Cruces	88003
NEW YORK	Ithaca	14853
	Geneva	14456
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NORTH DAKOTA	Fargo	58102
OHIO	Columbus	43210
	Wooster	44691
OKLAHOMA	Stillwater	74074
OREGON	Corvallis	97331
PENNSYLVANIA	University Park	16802
PUERTO RICO	Rio Piedras	00928
RHODE ISLAND	Kingston	02881
SOUTH CAROLINA	Clemson	29631
SOUTH DAKOTA	Brookings	57006
TENNESSEE	Knoxville	37901
TEXAS	College Station	77843
UTAH	Logan	84322
VERMONT	Burlington	05401
VIRGINIA	Blacksburg	24061
VIRGIN ISLANDS	St. Croix	00850
WASHINGTON	Pullman	99163
WEST VIRGINIA	Morgantown	26506
WISCONSIN	Madison	53706
WYOMING	Laramie	82071

Economic Trends

[1] Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates. [2] Average annual quantities of farm food products purchased by urban wage earner and clerical worker households (including those of single workers living alone) in 1959-61—estimated monthly. [3] Annual and quarterly data are on 50-State basis. [4] Annual rates seasonally adjusted third quarter. [5] Seasonally adjusted. [6] As of March 1, 1967. [7] As of February 1. [8] As of Nov. 1, 1976. [9] Preliminary.

Source: U.S. Dept. of Agriculture (Agricultural Prices, Foreign Agricultural Trade, and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Monthly Retail Trade Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale and Consumer Price Index).

Item	Unit or Base Period	1967	1976 Year	1976 Sept.	1977 July	1977 August	1977 Sept.
Prices:							
Prices received by farmers	1967=100	—	186	186	180	175	174
Crops	1967=100	—	197	204	182	173	171
Livestock and products	1967=100	—	177	172	179	177	177
Prices paid, interest, taxes and wage rates	1967=100	—	192	193	203	202	201
Prices paid (living and production)	1967=100	—	188	189	198	196	196
Production items	1967=100	—	193	194	201	199	197
Ratio [1]	1967=100	—	97	96	89	87	87
Wholesale prices, all commodities	1967=100	—	183.0	184.8	194.9	194.6	195.3
Industrial commodities	1967=100	—	182.4	184.8	195.8	196.9	197.8
Farm products	1967=100	—	191.0	191.9	190.5	181.2	181.9
Processed foods and feeds	1967=100	—	178.0	177.2	187.8	185.1	184.2
Consumer price index, all items	1967=100	—	170.5	172.6	182.6	183.3	184.0
Food	1967=100	—	180.8	181.6	194.6	195.2	194.5
Farm Food Market Basket: [2]							
Retail cost	1967=100	—	175.4	174.8	180.4	180.8	179.7
Farm value	1967=100	—	178.8	174.7	181.3	180.7	177.6
Farm-retail spread	1967=100	—	173.2	174.8	179.8	180.9	181.0
Farmers' share of retail cost	Percent	—	40	39	39	39	38
Farm Income: [3]							
Volume of farm marketings	1967=100	—	121	125	118	120	124
Cash receipts from farm marketings	Million dollars	42,817	94,325	8,060	7,427	7,385	7,600
Crops	Million dollars	18,434	47,937	4,192	3,684	3,320	3,400
Livestock and products	Million dollars	24,383	46,389	3,868	3,743	4,065	4,200
Realized gross income [4]	Billion dollars	49.9	103.6	100.9	—	—	[9]97.9
Farm production expenses [4]	Billion dollars	38.2	81.7	82.3	—	—	[9]81.7
Realized net income [4]	Billion dollars	11.7	21.9	18.6	—	—	[9]16.2
Agricultural Trade:							
Agricultural exports	Million dollars	6,380	22,996	1,796.9	1,748.9	1,541.6	1,733.8
Agricultural imports	Million dollars	4,452	10,992	912.4	1,014.8	1,005.1	1,015.7
Land Values:							
Average value per acre	Dollars	[6]168	[7]390	[8]430	[7]456	—	—
Total value of farm real estate	Billion dollars	[6]182	[7]396	—	[7]460	—	—
Gross National Product: [4]	Billion dollars	796.3	1,706.5	1,727.3	—	—	1,911.3
Consumption	Billion dollars	490.4	1,094.0	1,102.2	—	—	1,216.7
Investment	Billion dollars	120.8	243.3	254.3	—	—	300.6
Government expenditures	Billion dollars	180.2	361.4	363.0	—	—	405.6
Net exports	Billion dollars	4.9	7.8	7.9	—	—	−11.6
Income and Spending: [5]							
Personal income, annual rate	Billion dollars	626.6	1,382.7	1,401.8	1,539.2	1,546.9	1,558.8
Total retail sales, monthly rate	Million dollars	26,151	54,324	54,100	58,866	59,743	59,015
Retail sales of food group, monthly rate	Million dollars	5,759	11,749	11,774	12,705	12,517	12,542
Employment and Wages: [5]							
Total civilian employment	Millions	74.4	87.5	87.8	90.6	90.8	91.1
Agricultural	Millions	3.8	3.3	3.3	3.2	3.3	3.2
Rate of unemployment	Percent	3.8	7.7	7.8	6.9	7.1	6.9
Workweek in manufacturing	Hours	40.6	40.0	39.7	40.3	40.2	40.0
Hourly earnings in manufacturing, unadjusted	Dollars	2.83	5.19	5.31	5.65	5.65	5.73
Industrial Production: [5]	1967=100	—	129.8	130.6	138.8	138.2	138.8
Manufacturers' Shipments and Inventories: [5]							
Total shipments, monthly rate	Million dollars	46,487	98,168	98,387	109,208	110,952	—
Total inventories, book value end of month	Million dollars	84,527	166,587	164,966	174,571	174,936	—
Total new orders, monthly rate	Million dollars	47,062	98,497	98,476	108,598	111,133	—

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